

REMARKS

The Examiner is thanked for the thorough examination of the application. The Office Action, however, tentatively rejected all claims 1-5. In response, Applicant submits this amendment. Applicant respectfully requests amendment of the above-identified application in the manner identified above and that the patent be granted in view of the arguments presented. In this regard, claim 5 is amended and supported by FIG. 3. In FIG. 3, the first and second waveforms Fa and Fb are complementary to alternatively drive the organic light emitting diode in a time period of T, wherein the amplitude of the first waveform Fa is equal to the second waveform Fb. See also page 6, lines 8-17 of the present application. Accordingly, the foregoing amendment adds no new matter to the application.

After entry of this amendment, claims 1-5 remain pending in the application. Reconsideration of this application is respectfully requested in light of the amendments and the remarks contained below.

Discussion of Rejection of 35 U.S.C. 102 (e)

Claims 1-3 stand rejected under 35 U.S.C. 102 (e) as allegedly anticipated by Sung (U.S. Patent No. 6,950,082). Applicant respectfully traverses the rejections for the reasons as follow.

Independent claim 1 recites:

1. An active-matrix organic light emitting diode display comprising an organic light emitting diode, a first driving transistor connecting an anode of the organic light emitting diode and a first driving voltage having a first waveform, a second driving transistor connecting an anode of the organic light emitting diode and a second driving voltage having a second waveform, and a switch transistor connecting and switching the first and second driving transistors, ***wherein the first waveform and the second***

waveform are complementary to alternatively drive the organic light emitting diode.

(*Emphasis added.*) Claim 1 patently defines over the cited art for at least the reason that the cited art fails to disclose the features emphasized above.

As disclosed in page 5, line 27 to page 6, line 7 of the present application, the organic light emitting diode 1 can be alternatively driven by the first driving transistor T2a connected to the first voltage drive source Va+ or the second driving transistor T2b connected to the second voltage drive source Vb+. The total current passing through the driving transistors T2a and T2b determines the brightness of the organic light emitting diode 1. That is, according to the claimed embodiments, the driving power of the organic light emitting diode 1 can be alternatively provided by utilizing the first voltage drive source Va+ or the second voltage drive source Vb+.

Particularly, the first voltage drive source Va+ provides a driving voltage to enable the first driving transistor T2a during the period of Ta without the second voltage drive source Vb+ providing power. Alternatively, the second voltage drive source Vb+ provides a driving voltage to enable the second driving transistor T2b during the period of Tb without the first voltage drive source Va+ providing power. See page 6, line 18-25 and FIG. 3 of the present application.

In contrast, and referring to FIG. 2 and col. 4, lines 11-17 of Sung ('082), the switch 233 controlled by the scan signal is connected between the sources of the transistor M21, M22 and M23 to avoid a situation in which the transistors M21, M22 and M23 are always turned on despite the voltage level of the data signal, which results from the negative voltage Vss received by the cathode of the light emitting diode 235.

It is noted that the switch M21 of Sung ('082) is connected to a "driving voltage" (VDD), and the transistor M3 is connected to a "reference voltage" (Vref). Applicant submits that the waveforms of the voltages "VDD" and "Vref" are not "complementary to alternatively drive the organic light emitting diode," as expressly claimed in claim 1.

Moreover, as the transistor M3 of Sung is only provided to avoid a situation in which the transistors M21, M22 and M23 are always turned on despite the voltage level of the data signal, Applicant disagrees with the Office Action's reliance on the transistors M21 and M3 of Sung to teach the first and second driving transistors of the present application. See col. 4, lines 26-29 of Sung ('082).

For at least the reasons described above, the transistor M3 of Sung ('082) cannot properly be equated to the second driving transistor of the claimed embodiments. For at least this reason, claim 1 patently defines over the cited Sung reference.

To anticipate a claim, a reference must teach every element of the claim. As Sung fails to teach or suggest all the limitations of claim 1, Applicant therefore respectfully requests that the rejection of claim 1 be withdrawn and the claim passed to issue. Insofar as claims 2-3 depend from claim 1, and therefore incorporate all of the limitations of claim 1, these claims are also in condition for allowance.

The Office Action further rejects claims 1-4 under 35 U.S.C. 102 (e) as allegedly anticipated by Sung (U.S. Patent No. 6,680,580). Applicant respectfully traverses the rejections for the reasons as follow.

In Sung ('580), the transistor 108 is designed to cooperate with the operating voltage, so as to temporarily turn off the transistor 102 and the light-emitting device 104 during a period when the frame is in an OFF state. Furthermore, the digital data voltage

Vdata is also cooperated with the common voltage Vcom, so as to be input with a negative voltage when it is at a voltage low level state. Therefore, it can achieve an objective of temporarily turning off the transistor 102 and the light emitting device 104 when the frame is in an OFF state. See FIGs. 4-5 and col. 6, lines 19-34 of Sung ('580).

Applicant first notes that the waveforms of voltages VDD and Vcom of Sung ('580) are not "complementary for alternatively driving the organic light emitting diode," as expressly recited in claim 1. Moreover, the transistor 108 is only provided to temporarily turn off the transistor 102 and the light emitting device by cooperating with the voltage values and the clock relationship among the digital data voltage Vdata, the scanning voltage Vscan and the common voltage Vcom. Therefore, Applicant submits that the transistor 108 cannot be properly equated to the second driving transistor as recited in claim 1 of the present application.

Again, to anticipate a claim, a reference must teach every element of the claim. For at least the reasons described above, Sung ('580) fails to disclose all features of the claimed embodiments, defined by claim 1 of the present application. As Sung fails to teach or suggest all the limitations of claim 1, Applicant therefore respectfully requests that the rejection of claim 1 be withdrawn and the claim passed to issue.

Insofar as claims 2-4 depend from claim 1, and therefore incorporate all of the limitations of claim 1, these claims are also in condition for allowance.

Rejections of 35 U.S.C. 103 (a)

The Office Action also rejected claims 1-5 under 35 U.S.C. 103(a) as allegedly unpatentable over Yumoto et al. (U.S. Patent No. 6,542,142) in view of Chen et al. (U.S.

Patent No. 6,891,520). Applicant respectfully traverses the rejection made by the Examiner for the reasons discussed below.

As disclosed in FIG. 3 and col. 8, lines 40-45 of Yumoto, the switch SW1 is connected to either a power-supply voltage Vcc or a voltage Vpp. This switch SW1 selects either the power-supply voltage Vcc or the voltage Vpp in accordance with a control signal Sw. The voltage selected by the switch SW1 becomes a charging voltage of the capacitor C1.

It is quite clear from FIG. 3 and its related description of Yumoto that the switch SW1 is only for selection of the voltages Vcc or Vpp, however, Yumoto does not teach or suggest that the waveforms of the voltages Vcc or Vpp are “complementary to alternatively drive the organic light emitting diode,” as recited in claim 1.

For at least the reasons described above, the Office Action has not established a *prima facie* showing obviousness against the present application (because even if the reference could be properly combined, they fail to disclose all features of claim 1), and claim 1 should be allowable over the combination of Yumoto and Chen. Applicant therefore respectfully requests that the rejection of claim 1 be withdrawn and the claim passed to issue.

Insofar as claims 2-5 depend from claim 1, and therefore incorporate all of the limitations of claim 1, these claims are also in condition for allowance.

As a separate and independent basis for the patentability of the claims over the combination of Yumoto and Chen, Applicant submits that the combination of Yumoto and Chen does not render obvious certain claims. In this regard, the Office Action combined Chen with Yumoto to reject claims 1-5 on the solely expressed basis that

“because this would improve a wider viewing angle, while fabricating a driving circuit at low cost and low power consumption.” (Office Action, p. 6). This rationale is both incomplete and improper in view of the established standards for rejections under 35 U.S.C. § 103.

In this regard, the MPEP section 2141 states:

Office policy has consistently been to follow Graham v. John Deere Co. in the consideration and determination of obviousness under 35 U.S.C. 103. As quoted above, the four factual inquires enunciated therein as a background for determining obviousness are briefly as follows:

- (A) Determining of the scope and contents of the prior art;
- (B) Ascertaining the differences between the prior art and the claims in issue;
- (C) Resolving the level of ordinary skill in the pertinent art; and
- (D) Evaluating evidence of secondary considerations.

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BASIC CONSIDERATIONS WHICH APPLY TO OBVIOUSNESS REJECTIONS

When applying 35 U.S.C. 103, the following tenets of patent law must be adhered to:

- (A) The claimed invention must be considered as a whole;
 - (B) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination;
 - (C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention and
 - (D) Reasonable expectation of success is the standard with which obviousness is determined.
- Hodosh v. Block Drug Co., Inc., 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986).

Simply stated, the Office Action has failed to at least (1) ascertain the differences between and prior art and the claims in issue; and (2) resolve the level of ordinary skill in the art. Furthermore, the alleged rationale for combining the two references (i.e.,

reducing lot average critical dimensions) embodies clear and improper hindsight rationale. For at least this additional reasons, Applicant submits that the 103 rejections of claims 1-5 are improper and should be withdrawn.

Conclusion

The applicant believes that the application is now in condition for allowance and respectfully requests that all claims be so allowed.

If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

No fee is believed to be due in connection with this submission. If, however, any fee is believed to be due, you are hereby authorized to charge any such fee to deposit account No. 20-0778.

Respectfully submitted,

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